

REMARKS

I. Introduction

In response to the non-final Office Action mailed April 7, 2008, the Assignee submits the appended amendments and following remarks. In the amendments, claim 4 is added. Examples of support for claim 4 can be found in the specification at page 36, lines 1 – 4 and in Figure 10. Upon entry of the amendments, claims 1 and 3 – 4 are pending.

For at least the reasons below, Assignee traverses the Office Action's rejections and kindly requests allowance of claims 1 and 3 – 4.

II. Rejection of Claims 1 and 3 under Section 102(b)

The Office Action rejected claims 1 and 3 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,673,293 to Scarpa, *et al.* ("Scarpa").

To sustain a rejection under 35 U.S.C. § 102(b), each element as set forth in a claim must be expressly or inherently described in a single prior art reference. (MPEP § 2131). Scarpa does not expressly or inherently describe each element recited in claims 1 and 3. Thus, withdrawal of the rejection is respectfully requested.

Specifically, Scarpa fails to disclose or suggest "deriving control signals from said soft and hard decision samples, wherein the control signals comprise a candidate error term and a combining weight; and using said control signals to jointly determine operation of said timing recovery module, said carrier recovery module, said automatic gain control module, and said equalization module," as recited in claim 1.

It appears the Office Action contends Scarpa discloses control signals to jointly determine operation as “modulation type selection (MTS) signals.” (*See* Office Action, pg. 2). Even assuming that MTS signals are control signals to jointly determine operation, which the Assignee is not conceding, the MTS signals are not derived from soft and hard decision samples, as is required by claim 1. Instead, the MTS signals are derived from the presence of a tone or the absence of a tone of a received signal. (*See* Scarpa, column 13, lines 20 – 26; Fig. 4). If a tone is detected, the MTS signals indicate a Vestigial Sideband (VSB) signal is being received. (*See id.*) If no tone is detected, the MTS signals indicate a Quadrature Amplitude Modulation (QAM) signal is being received. (*See id.*) The tone is not a soft decision sample or a hard decision sample and, thus, the MTS signals are not derived from soft decision samples and hard decision samples. Accordingly, the Assignee submits that Scarpa fails to disclose each element recited in claim 1.

Moreover, and again assuming the MTS signals are control signals to jointly determine operation, which is not conceded, the MTS signals do not “comprise a candidate error term and a combining weight,” as is required by claim 1. Instead, the MTS signals merely indicate to the demodulator that it should operate in VSB mode if a tone is received or in QAM mode if a tone is not received. (*See* Scarpa, column 13, lines 20 – 26).

Since, even if Scarpa discloses controls signals that are MTS signals, Scarpa fails to disclose controls signals to jointly determine operation that are derived “from said soft and hard decision samples” and “comprise a candidate error term and a combining weight,”

Scarpa fails to disclose or suggest each element recited in claim 1. For at least these reasons, Scarpa does not anticipate claim 1. Prompt withdrawal of the rejection and allowance of claim 1 is kindly requested. Claim 3 depends from and further limits claim 1. Accordingly, the Assignee respectfully requests withdrawal of the rejection and allowance of claim 3 as well.

III. New Claim 4

New Claim 4 depends from and further limits claim 1. Reasons for allowance for claim 1 are provided above. For at least those same reasons, the Assignee submits claim 4 is patentable in view of the cited references. Allowance of claim 4 is kindly requested.

CONCLUSION

After entry of the amendments, claims 1 and 3 – 4 are pending in the application. The Office Action rejection is believed to be traversed by the present response. Accordingly, Assignee respectfully requests allowance of claims 1 and 3 – 4. The Examiner is invited and encouraged to contact the undersigned attorney of record at (404) 745-2520 if such contact will facilitate a Notice of Allowance. If any additional fees are due, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 11-0855.

Respectfully submitted,

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